

ABSTRACT OF THE DISCLOSURE

A method and apparatus for detecting surge in a refrigeration system that includes a centrifugal compressor having an impeller and a compressor entrance, an evaporator that receives a fluid refrigerant, a suction line that flows the refrigerant from the evaporator to the compressor entrance. The evaporator includes a heat-exchange coil supplied with a liquid through a supply line entering the evaporator. The liquid is disposed in a heat-exchange relationship with the refrigerant within the evaporator. The method and apparatus automatically and periodically performing the steps of measuring a fluid temperature of the liquid proximate the supply line entering the evaporator; measuring a refrigerant temperature of the refrigerant proximate the compressor entrance; and using the fluid temperature and the refrigerant temperature to detect surge in the refrigeration system.